

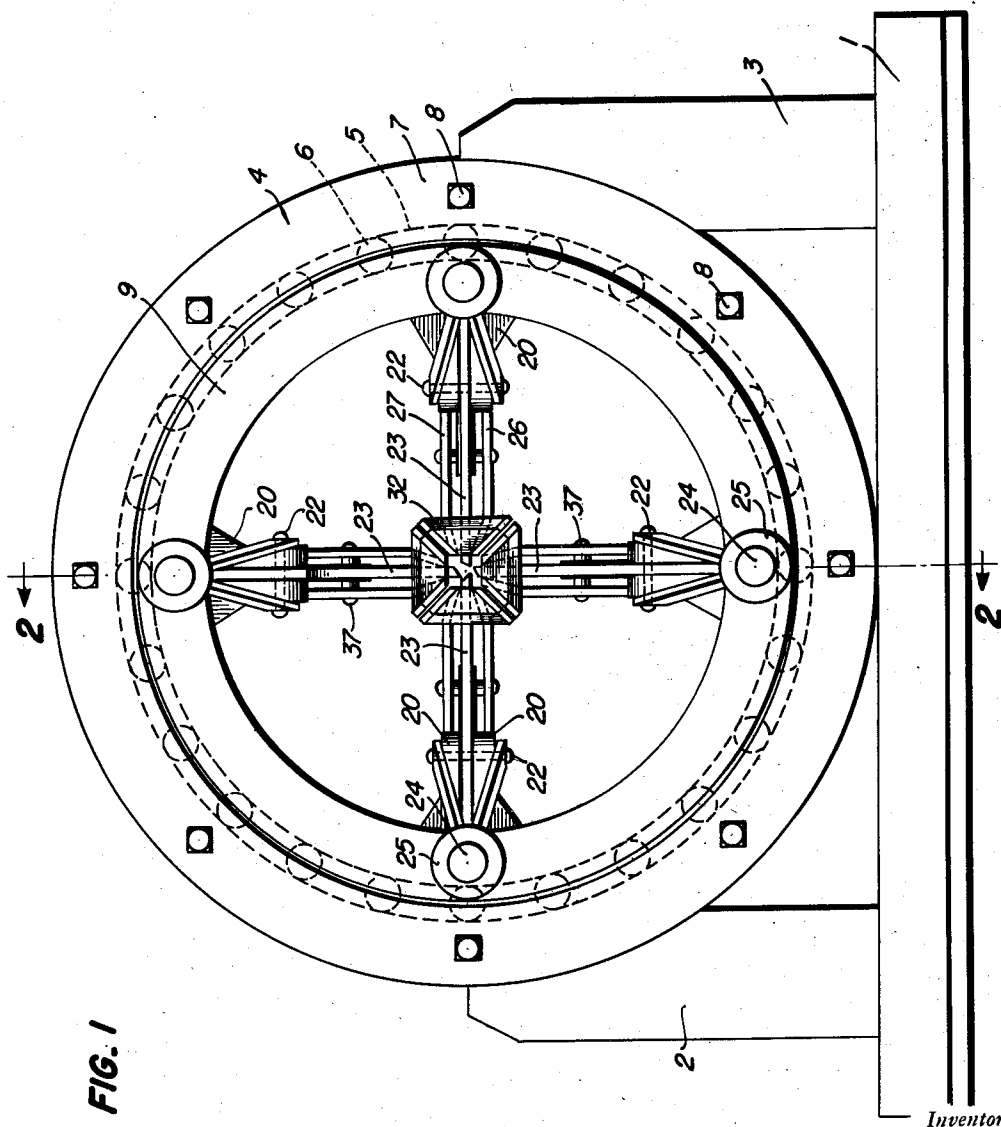
Jan. 8, 1952

M. T. ALEXANDER
POLE-STRIPPING MACHINE

2,581,829

Filed May 9, 1946

3 Sheets-Sheet 1



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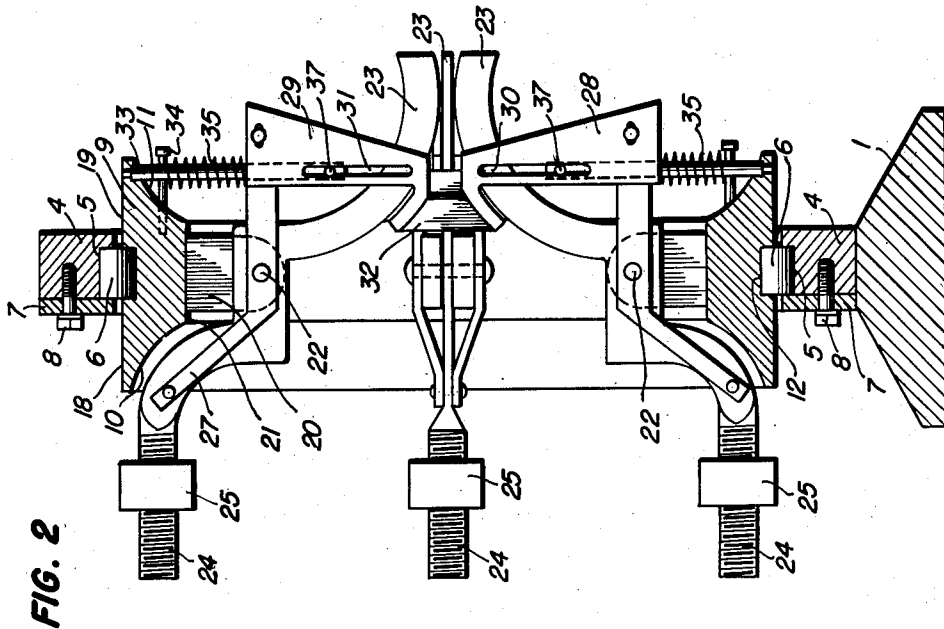
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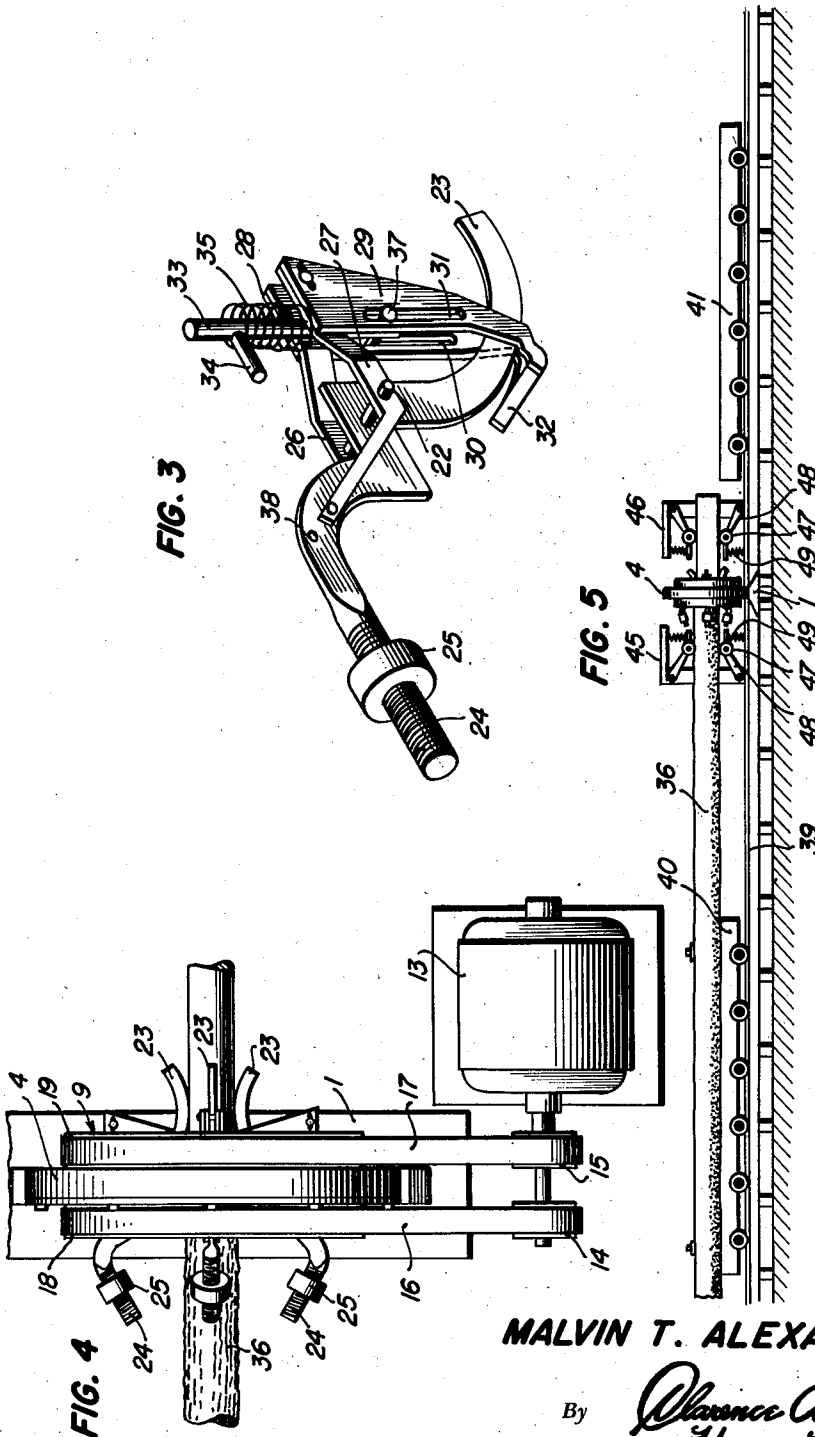
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UNITED STATES PATENT OFFICE

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POLE-STRIPPING MACHINE

Malvin T. Alexander, Seattle, Wash.

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4 Claims. (Cl. 144-208)

1

This invention relates to improvements in pole-stripping machines. An object of the invention is to provide an improved pole-stripping machine for peeling the bark from raw poles or pulp wood.

Another object of the invention is to provide an improved pole-stripping machine having a plurality of pivoted, radially adjustable arcuate cutting knives supported by a rotatable cutter-head, whereby poles fed through the machine will have their surfaces engaged by said rotating cutter blades or knives to cut the bark from the poles.

A further object of the invention is to provide an improved pole-stripping machine including a fixed frame in which a rotary cutter-head will be mounted upon roller bearings, said cutter-head supporting a plurality of pivoted arcuate-shaped cutter blades or knives, together with adjustable weights for forcing the blades or knives to follow the varying surface contours of the logs as they are fed to and through said machine.

Another object of the invention is to provide an improved pole-stripping machine including a fixed supporting base and a rotatably mounted cutter-head mounted upon roller bearings therein, adapted to be driven by a suitable electric motor and belt or belts, said cutter-head having a plurality of radially disposed slotted guides and pivoted arcuate cutter blades or knives with inter-connected centrifugal weights whereby a pole will be quickly stripped of its bark as it is fed through the machine.

Another object of the invention is to provide an improved pole-stripping machine which will be highly efficient in operation and relatively inexpensive to manufacture and produce.

Other objects will appear as the description proceeds:

In the accompanying drawings which form a part of this application:

Figure 1 is a front elevation of the improved pole-stripping machine;

Figure 2 is a sectional view taken on the line 2-2 of Figure 1;

Figure 3 is a perspective view of the slotted guide mechanism with the pivoted arcuate cutting blade and connected adjustable counterweight;

Figure 4 is a plan view of the improved pole-stripping machine; and

Figure 5 is a side elevation of the improved machine showing a log supported on a logging truck being run through the machine with a

2

second logging truck ready to receive the pole after its bark has been stripped therefrom.

Like characters of reference are used throughout the following specification and the accompanying drawings to designate corresponding parts.

In carrying out the invention, there is provided a base or support 1 having the upstanding bracing standards 2 and 3, between which the annular stationary frame 4 is positioned. An annular groove 5 is cut in the stationary frame 4 and forms a race for the series of roller bearings 6, which are held in place by the thrust ring 7 secured to the frame 4 by means of the bolts 8.

The cylindrical rotary cutter-head 9 is formed with the dished beveled sides 10 and 11, and is further provided with a centrally disposed peripheral race or groove 12 to cooperate with and receive the heretofore mentioned roller bearings 6.

An electric motor or other source of power 13 will be supported adjacent the base or support 1, and will be provided with spaced pulleys 14 and 15 which are connected by means of the belts 16 and 17 to the spaced peripheral drive surfaces 18 and 19 at the opposite sides of the race or groove 12 on the rotary cutter-head 9.

Four pairs of inwardly extending, spaced bearing ears 20 are positioned 90° apart on the inner surface 21 of the rotary cutter-head 9, and are connected by the cross pins 22, which in turn pivotally support the depending, arcuate-shaped cutting blades or knives 23, the convex cutting edges of which are ground to an approximate 15° angle from the square.

The upper ends of the blades or knives 23 are curved outwardly and terminate in the threaded ends 24 upon which the counterweights 25 are adjustably received to provide for the continuous contact of said cutting blades with the varying surfaces of the pole as it is being fed through the machine.

Oppositely disposed bracket arms 26 and 27 are fastened at their outer ends to the opposite sides of the outwardly curved portions of the knife or blade extensions, and are apertured to fit over the cross pins 22 and to extend forwardly thereof, supporting the inwardly directed, spaced guide arms 28 and 29 which are slotted at 30 and 31 and are formed with the pole guide noses or heads 32.

Radially and inwardly extending pins 33 are mounted in the rotary cutter-head 9 and support the longitudinally extending pins 34 which are received in bores in said cutter head 9. Coil

springs 35 are disposed about the pins 33 and engage the outer edges of the guide arms 28 and 29 to yieldingly advance said arms into contact with the surface of a pole 36 as it passes through the machine. Cross pins 37 are mounted through the lower ends of the pins 33 and operate in the slots 30 and 31.

In the event there is insufficient centrifugal pressure available on the blade ends 24, coil springs (not shown) may be connected between the aperture 38 and the adjacent edge of the rotary cutter-head 9 to provide the necessary tension upon said cutter blades or knives.

In Figure 5 of the drawings, there is illustrated a track 39 and spaced logging trucks 40 and 41 disposed at the opposite sides of the pole-strip-ping machine. A log is bolted on the truck 40 and is forced into contact with the guide or guide heads 32, which immediately open up due to the pin and slot connections to permit the pole to start through the machine. The arcuate knives or blades 23 will automatically engage the surface of the log, and as the rotary head is rapidly rotated, the bark will be quickly cut and removed from the pole, regardless of its surface contour, due to the centrifugal action of the weights forcing the blades or knives into engagement with the surface of the pole.

Spaced guides 45 and 46 will be mounted at the opposite sides of the peeling machine, and will include the rollers 47 on the ends of the pivoted arms 48, which will be urged into contact with the surface of the pole by means of the springs 49.

It has been found that this machine may be efficiently operated by two men and will have a capacity of at least one hundred telephone poles per hour.

While the preferred embodiment of the instant invention has been illustrated and described, it will be understood that it is not intended to limit the scope of the invention thereto, as many minor changes in detail of construction may be resorted to.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

1. A centrifugally advanced cutter, in a rotary cutter head, comprising a cutter support pivotally mounted intermediate its ends, a convex cutting edge on the cutter support adjacent one end thereof, and a flyweight adjustably mounted on the cutter support adjacent its opposite end, the pivotal axis of said cutter support and the axis of curvature of said cutting edge being parallel to each other and normal to the axis of rotation of said cutter head.

2. Log peeling equipment which includes a cutter head mounted to revolve about an axis, arcuate cutter blades mounted in said head to swing in arcs which lie in planes containing said cutter head axis, said blades having arcuate cutting edges lying in planes containing said cutter head, threaded extensions on the blades also movable in arcs which lie in planes containing said cut-

ter head axis, and flyweights threaded on the threaded extensions for adjustment longitudinally thereof and for advancing the blades toward said axis as the head revolves.

3. A log peeling apparatus comprising an annular cutter head mounted to revolve about an axis, cutter supports having convex blades on their inner ends and being pivotally mounted at their centers on the inner surface of the cutter head on axes at right angles to the cutter head axis so as to swing in planes containing said cutter head axis, U-shaped log contacting guides straddling the inner blade ends of the cutter supports and resiliently mounted in the cutter head for movement radially toward and away from said cutter head axis for guiding work through said head, and means connecting said guides to the cutters for swinging the blades in said planes upon movement of the guides either toward or away from said cutter head axis.

4. A log peeling apparatus comprising an annular cutter head mounted to revolve about an axis, cutter supports having convex blades on their inner ends and being pivotally mounted at their centers on the inner surface of the cutter head on axes at right angles to the cutter head axis so as to swing in planes containing said cutter head axis, U-shaped log contacting guides straddling the inner blade ends of the cutter supports and resiliently mounted in the cutter head for movement radially toward and away from said cutter head axis for guiding work through said head, means connecting said guides to the cutters for swinging the blades in said planes upon movement of the guides either toward or away from said cutter head axis, and adjustable flyweights mounted on the outer ends of the cutter supports.

MALVIN T. ALEXANDER.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
13,180	Peckham	July 3, 1855
314,876	Poole et al.	Mar. 31, 1885
397,114	Dolsen	Feb. 5, 1889
436,175	Harley	Sept. 9, 1890
721,834	Robertson	Mar. 3, 1903
817,943	Waltz	Apr. 17, 1906
1,248,700	Olson	Dec. 4, 1917
1,539,603	Sapronos	May 26, 1925
2,109,414	Deiters et al.	Feb. 22, 1938
2,299,523	Carpmail	Oct. 20, 1942
2,448,689	Schnyder	Sept. 7, 1948

FOREIGN PATENTS

Number	Country	Date
20,316	Norway	Nov. 26, 1909
29,308	Sweden	Aug. 6, 1910
389,655	Germany	Feb. 5, 1924